DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

Bay Area Branch
690 Walnut Ave.St. 150
Vallejo, CA 94592-1133
(707) 649-5453
(707) 649-5493

Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Casey, William
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-026488
Date Inspected: 04-Oct-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 700
OSM Departure Time: 1730
Location: Job Site

CWI Name: Fred Von Hoff

Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**CWI Present:**	☑ Yes	☐ No	
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☐ Yes	☐ No	☑ N/A
				Approved WPS:	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: OBG Sections

Summary of Items Observed:

This Quality Assurance (QA) Inspector, Craig Hager was on site at the job site between the times noted above. This QA Inspector was on site to randomly observe Quality Control (QC) personnel perform Non-Destructive Testing (NDT) and monitor American Bridge/Fluor (ABF) welding operations. This Quality Assurance (QA) Inspector, Craig Hager observed the following.

Orthotropic Bridge Girder (OBG) Sections:

12E/13E A1 thru A5: This QA Inspector randomly observed ABF welding personnel Rick Clayborn (#2773) adjusting the various fit up aids previously attached to the deck at various locations to align the deck plates. This QA Inspector observed QC Inspector Fred Von Hoff was present and using a Cambridge Gauge to measure the planar offset between the 12E and 13E A – deck plates. This QA Inspector observed the measurements were written on the deck with soapstone and were changed as adjustments to the fitting aids were made. This QA Inspector observed several of the welds holding the nuts used with the fit up aids were broken and/or new fit up aids were added. This QA Inspector observed QC Inspector Fred Von Hoff monitoring the Shielded Metal Arc Welding (SMAW) process used to weld the fit up nuts to the deck. This QA Inspector randomly observed the base material was preheated to a minimum temperature of 150°F and verified by QC Inspector Fred Von Hoff with an electric temperature gauge. This QA Inspector randomly observed QC Inspector Fred Von Hoff verify the following welding parameters; 145 amperes. This QA Inspector observed a 3.2 diameter E7018H4R electrode was being used. The occasional welding observed appeared to comply with Welding Procedure Specification (WPS) ABF-WPS-D15-F1200A Rev-2. The fit up work appeared to be completed at approximately 1415 hours this date. This QA Inspector was aware and issue was addressed yesterday regarding the location, size and length of the

welds being used to hold the various fit up aids. The work observed this date appeared to comply with the contract requirements. This QA Inspector was informed the planar offset had been documented was awaiting Engineering approval.

12W/13W A1 thru A5: This QA Inspector randomly observed ABF personnel Jeff Stone at approximately 1115 hours using a power wire brush to clean the weld joint in preparation of welding. This QA Inspector was informed by QC Inspector Tony Sherwood the required documentation for the planar offset and fit up had been submitted to the Engineer for approval and that ABF was preparing the weld joint for welding. This QA Inspector was informed by ABF welding foreman James Zhen (#6001) at approximately 1145 hours that he had been informed approval had been obtained to start welding and that welding would start after the lunch break. This QA Inspector observed the induction heating equipment had been placed on the deck for preheating and confirmed with Lead QA Inspector Danny Reyes that approval had been granted to start welding on A-Deck. This QA Inspector observed the following ABF welding personnel using the Flux Cored Arc Welding (FCAW) at the following locations; Wai Kitlai (#2953) at the start of A-4, Xiao Jian Wan (#9677) at the start of A-1 and James Zhen (#6001) at the start of A-3. This QA Inspector randomly observed QC Inspector Jesus Cayabyab verify the base material had reached the minimum preheat temperature of 150° F with an electronic temperature gauge prior to the start of welding. This QA Inspector randomly observed as QC Inspector Jesus Cayabyab verified the following parameters; Wai Kitlai (#2953) 249 amperes 23 volts at a travel speed of 296 mm per minute for a heat input value of 1.16 Kj per mm, Xiao Jian Wan (#9677) 240 amperes and 23.3 volts at a travel speed of 320 mm per minute for a heat input value of 1.05 Kj per mm and James Zhen (#6001) 250 amperes and 23.2 volts at a travel speed of 306 mm per minute for a heat input value of 1.14 Kj per mm. The parameters noted appeared to be within the range of ABF-WPS-F3200. The welding was the continuous seal – fillet welds attaching the backing strap which will be removed and the weld back gouged.

This QA Inspector verbally informed QA SPCM Lead Inspector, Daniel Reyes, of the issues noted in this report for compliance therefore for further details of issues of significance see QA SPCM Lead Inspector, Daniel Reyes, Daily Inspection Report (6031) for this date.

Summary of Conversations:

This QA Inspector had general conversations with American Bridge/Fluor (ABF) and Caltrans personnel during this shift. Except as described above and noted above there were no notable conversations.

WELDING INSPECTION REPORT

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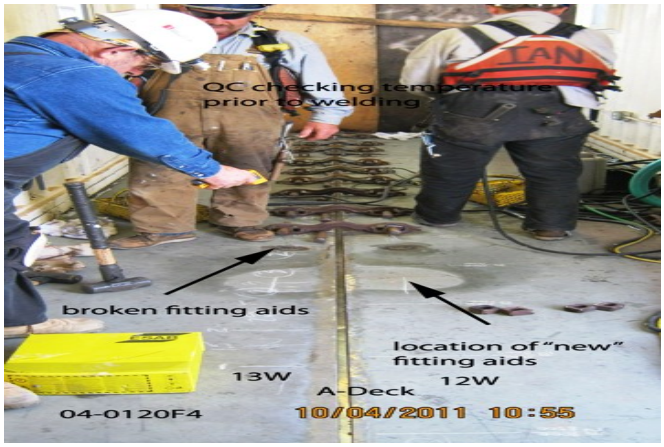

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Hager,Craig	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer